

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1.-36. (Cancelled)

37. (New) A node for use in a communications system comprising a plurality of nodes wherein each node is capable of communicating with plural other nodes via point-to-point wireless transmission links between the nodes, the node comprising:

a plurality of highly directional antennas;

a single radio subsystem for providing radio output signals for transmission via the antennas and for receiving signals received via the antennas to provide output signals from the radio subsystem; and,

a switch for switching the output of the radio subsystem to a selected one of the antennas for transmission of a radio signal output by the radio subsystem by said selected antenna and for switching an input of the radio subsystem to a selected one of the antennas such that a signal received by said selected antenna is passed as an input to the radio subsystem;

whereby the direction of transmission from said node to another node in the communications system and the direction of reception to said node from another node in the communications system is determined by operating the switch to switch to the appropriate antenna of said node.

38. (New) A node according to claim 37, wherein said node has plural links to other nodes, each of said plural links between respective pairs of nodes being associated with a time slot.

39. (New) A node according to claim 38, wherein each link for each node is associated with a distinct time slot.

40. (New) A node according to claim 38, wherein the allocation of time slots to the links can be varied such that a link may selectively be associated with more than one time slot.

41. (New) A node according to claim 37, wherein said node has a direct line-of-sight link with at least one other node such that said node can transmit a signal to another node in line-of-sight with said node.

42. (New) A node according to claim 37, wherein said node comprises a transmitter arrangement constructed and arranged to transmit a signal including said information to another node if and only if a signal received at said node includes information for another node.

43. (New) A node according claim 37, wherein said node is stationary.

44. (New) A node according to claim 37, wherein said node is arranged to be in a transmission mode for a time period which alternates with a time period for a reception mode.

45. (New) A node according to claim 37, wherein said node is arranged not to transmit to any other node information in a signal received by said one node when that information is addressed to said at least one node.

46. (New) A node according to claim 37, wherein said node has an addresser constructed and arranged to add to information in a received signal the address of a node to which a signal including said information is to be routed when said information is for another node.

47. (New) A node according to claim 46, wherein the addresser includes a route determiner constructed and arranged to determine the route of information through the system and to add an appropriate address to the information accordingly.

48. (New) A node according to claim 37, wherein said node has a processor constructed and arranged to determine if a received signal includes information for said node and to process information in a signal addressed to said node.

49. (New) A node according to claim 37, wherein the radio subsystem is arranged to transmit signals at frequencies greater than about 1 GHz.

50. (New) A node according to claim 37, wherein the link between two nodes is arranged to use simultaneously two or more frequency channels.

51. (New) A communications system, comprising:
a plurality of nodes, each node being capable of communicating with plural other nodes via point-to-point wireless transmission links between the nodes,
at least one of said nodes comprising a plurality of highly directional antennas, a single radio subsystem for providing radio output signals for transmission via the antennas and for receiving signals received via the antennas to provide output signals from the radio subsystem, and a switch for switching the output of the radio subsystem to a selected one of the antennas for transmission of a radio signal output by the radio subsystem by said selected antenna and for switching an input of the radio subsystem to a selected one of the antennas such that a signal received by said selected antenna is passed as an input to the radio subsystem;

whereby the direction of transmission from said at least one of said nodes to another node in the communications system and the direction of reception to said at least one of said nodes from another node in the communications system is determined by operating said switch to switch to the appropriate antenna of said at least one of said nodes.

52. (New) A system according to claim 51, wherein at least some of the nodes have plural links to other nodes, each of said plural links between respective pairs of nodes being associated with a time slot.

53. (New) A system according to claim 52, wherein each link for each node is associated with a distinct time slot.

54. (New) A system according to claim 52, wherein the allocation of time slots to the links can be varied such that a link may selectively be associated with more than one time slot.

55. (New) A system according to claim 51, wherein each node has a direct line-of-sight link with at least one other node such that each node can transmit a signal to another node in line-of-sight with said each node.

56. (New) A system according to claim 51, wherein each node comprises a transmitter arrangement constructed and arranged to transmit a signal including said information to another node if and only if a signal received at said node includes information for another node.

57. (New) A system according to claim 51, wherein each node is stationary.

58. (New) A system according to claim 51, wherein each node is arranged to be in a transmission mode for a time period which alternates with a time period for a reception mode.

59. (New) A system according to claim 51, wherein at least one node is arranged not to transmit to any other node information in a signal received by said at least one node when that information is addressed to said at least one node.

60. (New) A system according to claim 59, wherein each node is arranged not to transmit to any other node information in a signal received by said at least one node when that information is addressed to said at least one node.

61. (New) A system according to claim 51, wherein each node has an addresser constructed and arranged to add to information in a received signal the address of a node to which a signal including said information is to be routed when said information is for another node.

62. (New) A system according to claim 61, wherein the addresser includes a route determiner constructed and arranged to determine the route of information through the system and to add an appropriate address to the information accordingly.

63. (New) A system according to claim 51, further comprising a central system controller constructed and arranged to determine the route of information through the system.

64. (New) A system according to claim 51, wherein at least one node has a processor constructed and arranged to determine if a received signal includes information for said node and to process information in a signal addressed to said node.

65. (New) A system according to claim 51, wherein the radio subsystems of the nodes are arranged to transmit signals at frequencies greater than about 1 GHz.

66. (New) A system according to claim 51, wherein the link between two nodes is arranged to use simultaneously two or more frequency channels.

67. (New) A system according to claim 51, wherein each node is substantially identical.

68. (New) A system according to claim 51, wherein the system is connected to a conventional trunk network for providing access to other networks.

69. (New) A system according to claim 68, comprising a further node connected by a data connection to one of the nodes of the system and arranged to transfer a signal to or receive a signal from the trunk network or both.

70. (New) A system according to claim 51, wherein a data storage server is connected to or provided at a node.

71. (New) A system according to claim 51, wherein at least one link of a node is arranged to use a first transmission frequency and at least one other link of said node is arranged to use a second transmission frequency.

72. (New) A system according to claim 51, wherein some of the nodes are allocated to subscribers and some of the nodes are not allocated to subscribers, at least some

of said non-allocated nodes being solely for carrying information traffic between subscriber nodes.